

CLAIMS

1. A guiding device for guiding a vehicle to a target position by controlling a steering angle while  
5 estimating a vehicle position at least based on a steering angle value, characterized in that, in estimating the vehicle position, a slowing operation with respect to a change in a moving distance of the vehicle is applied to a turning curvature that is estimated based on the steering  
10 angle value.

2. The guiding device as claimed in claim 1, wherein a degree of slowing in the slowing operation is controlled based on detection of changes in a  
15 characteristic of a tire.

3. The guiding device as claimed in claim 2, wherein the characteristic of the tire includes a degree of abrasion of a tire, temperature of a tire or air  
20 pressure of a tire.

4. The guiding device as claimed in claim 1, wherein a degree of slowing in the slowing operation is controlled based on a degree of abrasion that is estimated  
25 by calculating a total traveling distance of the vehicle.

5. The guiding device as claimed in claim 1, wherein a degree of slowing in the slowing operation is increased when an absolute steering angle exceeds the  
30 predetermined threshold.

6. The guiding device as claimed in claim 1, wherein a degree of slowing in the slowing operation is

increased as an absolute steering angle increases.

7. The guiding device as claimed in claim 1,  
wherein a degree of slowing in the slowing operation is  
5 controlled based on detection of a friction coefficient of  
a road.

8. A vehicle position estimating device,  
comprising:  
10 a detector for detecting a moving distance of a  
vehicle;  
a change amount calculator for calculating an  
amount of a change in a direction of the vehicle every  
small moving distance based on a steering angle value; and  
15 a vehicle position estimator for estimating a  
position of the vehicle based on the amount of the change  
in the direction of the vehicle calculated by the change  
amount calculator; wherein  
in calculating the amount of the change in the  
20 direction of the vehicle, the change amount calculator  
applies a slowing operation with respect to a change in a  
moving distance of the vehicle to a turning curvature that  
is estimated based on the steering angle value.